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## ABSTRACT

This report, one of a series of country studies on higher education and employment, particularly in the humanities and social sciences, looks at the employment of social science and humanities graduates in Norway. The paper opens by briefly sketching some major interrelated developments in current society such as shifts in the economy, changes in production cultures and organizational structures, and the rediscovery of links between production and culture in society. A following section looks at characteristics of the humanities and social sciences noting the high proportion of females, the relatively low cost of studies in this area and the relatively unstructured nature of humanities and social science study. In an analysis of how current developments in the economy affect higher education, the paper argues that the increasingly complex skill needs in the economy demand introduction of elements of humanistic and/or social science studies into more specialized fields such as engineering and medicine. An examination of different professional cultures looks at consequences for work-life and institutional functioning. A final section evaluates current management trends: decentralization and management by objectives. (JB)

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**HIGHER EDUCATION AND EMPLOYMENT:  
THE CHANGING RELATIONSHIP**

**THE CASE OF THE HUMANITIES  
AND SOCIAL SCIENCES**

**EXPERT CONTRIBUTION - NORWAY**

**THE HUMANITIES, SOCIAL SCIENCES AND EMPLOYMENT**

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Project ii): Higher Education and Employment:  
The Case of the Humanities and Social Sciences

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This contribution is part of a series of studies prepared in the framework of the OECD Education Committee activity on Higher Education and Employment: The Changing Relationship. It deals with one of the three main topics covered by this activity, Higher Education and Employment: The Case of the Humanities and Social Sciences. Together with other country studies on this topic, it provides the background information for the preparation of a Secretariat general report that will be published by the OECD in 1992.

Country studies and general reports are also being made available for the other two projects included under this activity: The Flows of Graduates from Higher Education and their Entry into Working Life; Recent Developments in Continuing Professional Education.

The present contribution on The Humanities, Social Sciences and Employment has been written by Kjell Fide in his capacity as Science Adviser to the Royal Norwegian Ministry of Education, Research and Church Affairs. The views expressed are those of the author and do not necessarily commit the national authorities concerned or the Organisation.

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## THE HUMANITIES, SOCIAL SCIENCES AND EMPLOYMENT

This paper is an attempt to raise some fundamental issues emerging from the development of third level studies in the humanities and the social sciences on the one hand, and employment on the other. The paper is not a case study of Norway, although I shall sometimes use Norwegian experiences to illustrate general issues of relevance to many countries.

### Some Background Features

It seems necessary first to sketch briefly some major interrelated developments in current society which in my view justify increased attention to this problem area. I am referring to such issues as major shifts in the economy, changes in production cultures and in organizational structures, and the rediscovery of profound links between production and culture in society.

There is little agreement as to what a post-industrial society will be like. There is, however, substantial agreement between scholars, politicians and industrialists that our Western societies are moving out the industrial area. In its simplest sense, this means that manufacturing industries are experiencing the same development as occurred in agriculture a century ago: an enormous volume of production will be maintained, or even increased, with an increasing input of technology and capital, but with fewer and fewer people involved. While whether or not manufacturing industry will ever operate with as small a share of the work force as agriculture today is a matter of disagreement, there is very little doubt about the general direction of the development.

An industrial society is characterized by more than a high percentage of manpower involved in manufacturing industries. The predominant power structures in industrial societies are based upon, or at least related to, manufacturing industries. But with only a small proportion of the adult population directly involved in production in such fields, those power structures cannot be maintained in their traditional forms. The main survival strategies for such power structures have been discernible for many years now, and they may be summarized as follows:

1. Manufacturing industries are transferred to economically less developed countries in the process of building up an industrial society.
2. The expansion of the major service sectors in the economy is being kept in check, in order to delay the decline in manufacturing industries. This, incidentally, is clearly a major cause behind the unemployment problems of the Western world in recent years.
3. Industrial capital and technology are invading the service sectors in a process of industrialization of the services. This is particularly visible in the communication field, but is also increasingly felt in such sectors as health and education. The current policies of checking or reducing public services clearly aim at stimulating such a development.

The profound difference in production culture between manufacturing industries and services stems from the simple fact that the former handles dead raw material, and the latter human beings. In most services the outcome is strongly dependent upon the active participation of the client in the service process, whether the client is

a pupil, a patient, a passenger or a customer. The client's experience of the quality of the processes in which he or she is involved may be as important as any final product, and also influences strongly the final product. This means that economic theories, and concepts of productivity and efficiency, as developed in relation to manufacturing industries, have little relevance and may be quite meaningless in service industries.

Furthermore, while in manufacturing the emphasis is on control and exact prediction of process outcomes, services are often at their best when processes are open-ended, adapting to developments emerging from the process, and with a fairly wide range of potential final outcomes.

The current tendencies towards industrialization of the service industries may imply major shifts in production culture, introduced in the name of "efficiency". It tends to change profoundly the position of clients and employees in the production process. How far this will go, and what forms it may take is, however, still an open question.

Basic changes in organizational structures do, however, take place also in manufacturing industries, and even more so in the somewhat diffuse zone of activity on the borderline between manufacturing and services, often based on new technologies. As brought out by numerous studies on work patterns in the economy, the organization of semi-autonomous teams leads to a profound redefinition of the work role of the individual participant, and a different emphasis on the interrelationship between individual workers. For vocational training this may imply a decisive break with training traditions strictly oriented towards specific individual job functions.

At the higher levels of work organizations, the proliferation of staff functions and consultative services has long since eroded the more traditional hierarchical organizational structures. Even in this case, the traditional training for specific professional roles is completely inadequate for the variety of different roles expected from professionals within organizations. Various forms of matrix structures imply a constant change of roles according to the tasks to be performed, and to the individuals with whom one collaborates in different functions.

The reason why such changes are forcing their way through is clearly the need for more adaptable organizations, capable of coping with rapidly shifting and turbulent environments. This also implies renewed emphasis upon the total learning capacity of the organization as a whole, and not only of the top level. The emphasis on strict control, consistency and predictability has to give way to a more open-ended concept of even manufacturing processes, with a far more active utilization and development of the human resources involved. The number of jobs that can be performed on the basis of strict central programming is rapidly declining, or being automated.

Thus, simultaneous with the spread of industrialization in the services, we see at least a partial adaptation within manufacturing industries to a production culture traditionally associated with the services. Where those broad dynamics will take us is still a very open question, far more dependent upon the locus of power in society than on technological developments.

In the economically affluent part of the world, to which practically all Western countries belong in spite of all



the talk of crisis, and where most of the world's purchasing power rests, there is a gradual but consistent shift in market demand. Increasingly, as basic needs for products are satisfied, demand is shifting towards what may be termed qualitative aspects of the product. Success in markets depends more and more on marketing skills, design and other aspects that meet psychological needs, the ability to develop quality niches in the market, the specific kind of know-how built into the products, and often accompanying them as part of a broader package, the kind of organizational philosophy and cultural expressions built into software, etc. It is significant that in some of our countries the export of services by now matches that of manufactured products. But equally important is the strong component of services attached even to manufactured products, and often rooted in specific cultural features of the country producing them.

Our traditional faith in the economics of scale and the availability of raw materials as the basis for international competitiveness is being shaken by this. We discover (or historically speaking rather rediscover) new linkages between a country's economic capability and its culture in a broad sense.

Shifts in demand also imply a more direct concern for culture in its more narrow sense. Education and research represent large economic sectors, and the increased demand for such services stems from more than their assumed economic importance; they are services demanded for their general value, as an essential basis for the development of a society's total welfare. Increasingly this also applies to culture in the most narrow sense, artistic production and cultural activities undertaken by vast numbers for the sake of the activity itself. Our increasing spare time may become more and more devoted to such activities.

A significant proportion of our work force is already active in the cultural sector in this most narrow sense, in many countries about as many as in agriculture. Many sectors of the economy are indirectly dependent upon such activities; it has been calculated that 6-7 per cent of the GNP is created through activities based on the handling of various forms of intellectual products covered by copyright legislation, and this is only a part of professional cultural activities. We are dealing with one of the most rapidly expanding growth sectors in the economy, with strong repercussions in many economic sectors. In employment terms, its importance may well exceed that of information technology.

It should be added, that in a period of unemployment, job creation in the cultural sector is probably less expensive than in any other sector of the economy, and unsaturated markets are not difficult to find, providing that profitability is judged in societal terms.

The quantitative implications of the shift towards service industries, and the shift in product demand, are considerable, and could well run counter to some of the politically most fashionable ideas today about "mismatch" between education and the economy. We have to think in terms of a population requiring employment in the future, and we have to take a realistic view on where future employment is to be found. There can be little certainty on this point, except that manufacturing industries will take relatively few of them, even to the extent that we may have to think in terms of transfer of individuals from manufacturing industries to other types of activities. Highly qualified technological expertise is very much needed, but probably not in large quantities. The real future needs may require quite different

forms of professional competence.

In terms of what might be called "meta-economics" there are also other aspects which need consideration. A well functioning economy is fundamentally dependent upon a well-functioning society. This implies, among other things, a set of common cultural values and norms of social behaviour adhered to in most situations in society. It requires a population sufficiently enlightened to make sensible choices, both in economic markets and in political contexts, as well as the use made of the products of the economy for the creation of life quality. Again, this is very much a question of social insight and understanding and the appreciation of cultural variations.

#### Service Functions and Skills

The traditional economic distinctions between manufacturing industry and services are, however, becoming more and more blurred. It may be more relevant to look at the functions involved in the different parts of the economy, and the skill requirements associated with those functions.

The services are a mixed bag, but by and large they focus on human beings. Communication skills are essential. Foreign languages, of course, but even more so the ability to handle ones own language, and even master the variety of communication forms that transcend formal language.

Communication is a two-way process, it also requires the ability to understand the reactions of other people, individually and collectively. Even the current tendency towards bureaucratizing, industrializing and computer-

izing many services does not remove the need for such skills. It is increasingly realised that the real bottleneck to the effective utilization of information technology is not the technology itself, but the content and form of the messages communicated. Lacking competence in soft-ware production sets effective limits to the usefulness of such technologies, requiring not only language skills, but also a deep understanding of the receivers' perceptions - which are often remote from the intended meaning of the message.

Beyond this, we need a far better understanding of the macro-effects of the way services are organised and performed, whether by the use of information technology or in more traditional ways.

The skills implied by such functions, although obtainable through practical experience, are mainly provided by the social sciences and the humanities. Even in care-taking functions, such skills are basic. It may be said that they have the major responsibility for lifting care-taking professions out of the charity tradition.

Service functions based on such skills have, however, a much wider application in the economy. There are clear trends in manufacturing industry towards a shift of skill requirements, emphasis and power from the production processes to marketing functions. Knowing the market and its developments is essential, and success is increasingly dependent upon the ability to understand clients and customers, to communicate effectively with them, and to assess their real needs. Furthermore, the sale of industrial products are increasingly combined with accompanying services - instruction, demonstration and training, as well as design and other expressions of cultural features and organisational philosophy. When Italy does well in the automobil market, and Norway in

the market of computerized systems, it is not because of superior technology or cheap labour.

Manufacturing industry has already discovered the usefulness of linguists, psychologists, economists, law experts and organisationally oriented sociologists. It will soon make similar discoveries in the case of pedagogs, antropologists and specialists on cultural affairs and social geography. Historians may also come in handy, and there may even be some use for specialists on semiology and philosophy.

### Some Characteristics of the Humanities and the Social Sciences

There are some definitial issues involved. In line with the Norwegian tradition, I shall include history, theology and philosophy in the humanities, and psychology, economics and law in the social sciences.

Based on such definitions, the humanities and social sciences have in most countries a substantial proportion of the students at the third level. In the Norwegian case, which is probably not atypical, 18% of university students study the humanities, and 32% the social sciences. The corresponding figures for non-university institutions at the third level are 8% and 74%.

In quantitative terms, there is a majority of females in most of the studies in question. In the Norwegian case, which is hardly exceptional, the female proportions of such students are 56% in the universities, and 50% in the non-university institutions. In the Norwegian case, the latter includes teacher training for compulsory education. The share of females has increased rapidly in recent years, in most fields of study. This is also true

for the humanities and the social sciences. Males are still dominant among the teachers in those fields of study, although the female share is probably higher than in most other fields.

Another characteristic of those fields of study, are that mostly, they are inexpensive compared to other studies at the third level. They seem to require fewer resources per student in terms of equipment, building space and other facilities. There also seems to be an assumption that students in such fields can be taught in larger groups, so that the pupil/teacher ratio is usually higher than in other parts of higher education.

In most cases, studies in such fields are relatively unstructured, and often composed of elements which can be combined, but which also have their own independent value. As a consequence, a high percentage of the students do not aim at a final degree. The term "drop-out rate" is hardly appropriate in this case, but the percentage leaving without a final degree is about 50 in Norway, and high also in other countries, when compared with more structured professional courses.

Low costs and open structures may be reasons why access to the humanities and the social sciences is often less strictly regulated than in other fields. The percentage of students with relatively low achievement from upper secondary education is also probably higher in those fields than in many others at the third level, although at least in the Norwegian case, they also get a good share of high achievers.

### Some Consequences for Higher Education of Current Developments in the Economy

One consequence of the increasingly complex skill needs in the economy is the introduction of elements of humanistic and/or social science studies into the more specialized studies of other fields, such as e.g. engineering, medicine and agricultural studies and, to some extent, even natural science. The idea is to provide some interdisciplinary competence among the candidates even from such studies. This tendency seems to be increasing, although quite often, there is a lack of genuine integration of such crossdisciplinary elements in the specialized studies. Far too often, they are seen by the students as unnecessary deviations from the straight road to a professional degree.

One reason for this may be that the teaching of such "secondary" subjects in an educational context focussed on a different set of disciplines, often lack attraction for good teachers in the humanities and the social sciences, especially those with research aspirations within their specific fields. Such teachers often feel isolated, and the possibilities for a joint effort towards interdisciplinary integration are often quite limited.

There is no doubt, however, that it can be done successfully, as proved for instance in the Norwegian case. Examples are the integratin of technical, sociological and artistic subjects in the study of architecture, of organisation theory and the sociology of work in the natural sciences at the University of Oslo, of health care oriented sociology and economics in the study of medicine, especially at the University of Tromsø, and of social ecology in the study of agriculture.

A much older tradition is the requirement that students in most fields shall have a basic introduction to the philosophy of science. In the Norwegian case, this takes the form of a general requirement of university students to spend 1-2 terms at the beginning of their studies on philosophy, logic and the history and methods of scientific inquiry. This is a very old tradition in the Norwegian universities, and it has often been debated, and sometimes attacked in terms of "efficiency" arguments. Largely, however, the system have been maintained, and seems firmly rooted in most academic studies.

In many professional fields, there is an on-going discussion, and considerable disagreement, on the appropriate balance between more fundamental, generalized knowledge and more specialized technical knowledge. The historical tendency through most of this century towards the organisation of specialized professional studies in higher education, is based on the theory that a broader knowledge base beyond the professional specialization can be obtained either through practise, through the addition of more general subjects to the main course, or through the offer of later retraining.

This is countered by the proposition that in many fields, a better professional performance can be achieved through a fairly broad general study, followed by technically oriented specializations later on. A typical case here is information technology in a wide variety of practical contexts. There is certainly a need for such specialists, but it may be more limited than initially assumed. On the other hand, there is a great, and often underestimated need for personnel with a profound substance knowledge in specific areas, and additional training in computer technology, sufficient for their effective use of such technology in their special field of knowledge.



Probably, we are on the point of making a similar discovery in the case of the economists, who even with a solid grounding in their own discipline, are often ineffective in handling matters requiring profound insights in the substantive problems of a specific field of application. The limited practical success of specialists in the economics of education in the context of educational policy making and planning, is just one of many cases illustrating this point.

### The Culture of the "Soft Sciences"

The idea of the "two cultures", introduced in the international debate by J.P. Snow, is perhaps primarily a result of a traditional organisational pattern within the universities. There is, however, in most economic activities a clear dichotomy between two different ways of handling administrative and professional problems, and they may at least partly be related to the background training and professional indoctrination of individuals.

In planning terms, one approach presupposes clearly stated operational goals, from which sub-goals can be deducted, and from such a goal hierarchy fairly clear conclusions can be drawn about what should be done at the various levels and in the different sectors of an organisation. The other approach is to see goals as a rather diffuse set of concerns, the relative priority of which is a result of a range of compromises, which should not be too clearly spelled out. An organisation is then not seen as a streamlined hierarchy, with a concerted behaviour according to vertical instructions, but as a rather loosely coupled, organic system, finding sometimes contradictory solutions at various levels, and involved in two-way negotiations horizontally and vertically. The point is not then to determine an optimal set

of behaviour according to clearly defined objectives, but to find a satisfactory way of operation in relation to a wide set of conflicting demands and requirements.

There are fairly strong indications that training in the humanities and in most of the social sciences provides a better basis for handling complex situations with diffuse objectives and a wide set of concerns to be taken into account. This is really what studies of this kind are about. On the other hand, studies of technology, medicine and the more "exact" sciences often seem to socialize individuals into a world of reductionist models, with a clear-cut structure of aims and means, and with a kind of rationality requiring strict distinctions between input, processes and output.

It is interesting to note that while in traditional industrial production processes, when dead material is being transformed into more useful products, mechanistic models of "rationality" may be appropriate, while in the services, the distinction between final products and processes are often blurred or even meaningless. We are obviously facing basic differences in the kind of situations most frequently encountered, and we should make sure not to apply inappropriate methods of governance and decision making. The managerial paradigm must be adopted to the kind of problems to be faced.

There are clear indications, however, that with the gradual decline of the industrial society, and the emergence of a post-industrial society with an economy dominated by service functions, industrial capital, technology and managerial principles are invading many of the service sectors, in order to safeguard as much as possible of the societal power structure characteristic of industrial societies. Media, publishing firms, medical care and education are flooded with industrial capital,

and quite often forced to introduce traditional industrial ideas about how business should be performed. In many cases, the apparent gains in "efficiency" is paid for by a dramatic drop in the quality of services, as seen from the point of view of the clients.

The outcome of this struggle about the nature of the future post-industrial society remains an open question, and consequently, the question of what skills will be needed in that kind of society is also an open one.

It is interesting to note that the culture associated with many of the services in society, has similarities with what is often claimed to be the characteristics of a female culture. The female dominance in most service industries, as well as in such sectors of higher education as the social sciences, is no accident. And the historic development in those fields indicates that if there is a causal relationship here, it seems more likely that females are attracted to the service culture, than that the service culture has been shaped by a female culture carried by most of its employees.

The discussion about male and female cultures in our societies is still at a rather speculative level. The biggest question is perhaps whether typical features of the female culture are in fact features to be found among most subdued groups, tending to disappear when more equality has been achieved. This is a question which in the case of equalization between the sexes is still an open one.

Maybe some insights could also be drawn from the theories of learning. It seems well established that human thinking does not follow the pattern of traditional logic. In children this is very clear, but even adults think in fact in terms of associations and intuitive jumps, and

with an inseparable mixture of concepts and emotional reactions. This makes our thinking extremely subjective, creating great obstacles to interpersonal communication. In order to promote such communication, we are trained to translate our thinking into a logical language which only partly reflects the way we actually think. Learning the skill of such translation is an essential element of all formal education, which may, incidentally, be one of the reasons for the frequently deplored loss of creativity during many years of formal education.

Probably, both our creativity and our ability to trust our own thinking suffer more from the training in fields with a strict paradigmatic structure, while it may survive in more open studies with a wider range of unsolved questions, and often no definitely valid answers.

It is interesting to note too, that even in this case there seem to be certain gender differences. In popular terms, women are accused of more muddled thinking than men. The reason may simply be that women tend to take less seriously the school imposed obligation to translate all thinking into a specific logical code, and that they are less scared of admitting that their actual thinking does not follow such a pattern.

### Cultural Dichotomics in the Economy

In the economy, there are clear parallels to the traditional, rather mechanistic planning models, which have proved so inadequate in handling many economic and societal problems. The current wave of interest in "decentralisation", in both the public and the private sphere, has its background in failures in handling such problems through detailed centralized planning.

On the other hand, the fashionable ideas about "management by objectives" are based on the false notion that they offer policy makers a method by which they can effectively govern activities of which they know very little, and even escape responsibility for the results by consistently putting the blame on the lower levels responsible for the implementation of centrally stated goals. However, meaningful operational objectives can only be formulated on the basis of a profound insight into the processes leading to the realization of such objectives. Without such knowledge, no system of goal formulation and evaluation of performance at lower levels, eventually followed up by sanctions, can function effectively.

Decentralization is necessary, both in order to avoid the drowning of central decision-making levels in details, and because much of the relevant knowledge is located at lower levels. But decentralization must be based on a high level of trust in that actors at the lower levels possess the broad interdisciplinary insight and overview which can lead to wise decisions, not neglecting essential concerns. If professional performers at the implementation level act only on the basis of narrow professional specialisations, one can easily get into a vicious circle of central control mechanisms based on weak substance knowledge, leading to a de-professionalisation at the implementation level, which again calls for even stricter, and probably even more inappropriate control systems.

Most institutions of higher education, and especially the universities, still tend to favour the traditional function of feeding the service sector of the economy with high level personnel. In doing so, whether out of inertia or wisdom, they may in fact show more economic

sense than publicity minded business leaders with little knowledge of their own educational needs, or policy makers trying to stem the tide of the emerging post-industrial, service society.